

## REMARKS/ARGUMENTS

The rejections presented in the Office Action dated January 23, 2008 (hereinafter Office Action) have been considered. Claims 1-28 remain pending in the application. Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested.

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14 and 18 of copending application no. 10/750,290. Claims 1-6, 8-14, 16-20 and 25-28 are rejected based on 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2001/0006006 by Hill (hereinafter "*Hill*") and in view of U.S. Publication No. 2003/0217873 by Paradiso et al. (hereinafter "*Paradiso*"). Claim 7 is rejected based on 35 U.S.C. §103(a) as being unpatentable over Hill and in view of Paradiso and further in view of U.S. Patent No. 5,394,003 to Bales et al. (hereinafter "*Bales*"). Claims 15 and 21-24 are rejected based on 35 U.S.C. §103(a) as being unpatentable over Hill and in view of Paradiso and further in view of U.S. Patent No. 6,285,719 to Sobel (hereinafter "*Sobel*").

Applicant has considered the Office Action and, in particular, the Examiner's Response to Arguments in section 8, pages 13-14 of the Office Action, and the second full paragraph on page 5 of the Office Action. Applicant respectfully maintains that the basis for maintaining the rejection of the claims is improper and that the claims as presently pending are patentable over the asserted references, notwithstanding the Examiner's Response to Arguments.

Applicant's claim 1 recites, among other features, a touch sensitive apparatus that includes a plurality of active buffer circuits, each respectively coupled to a sensor configured to sense bending waves in a touch plate. Claim 1 further recites a controller coupled to the sensors via the active buffer circuits and to the excitation transducer via a non-actively buffered connection.

In the opening sentence of section 8 on page 13 of the Examiner's Response to Arguments, the Examiner continues to disagree with Applicant's argument that "*Paradiso* ... fails to disclose an excitation transducer of any kind." In Applicant's prior response,

Applicant asserted that “the Examiner has yet to identify a teaching in *Paradiso* that supports the Examiner’s contention that *Paradiso* discloses an excitation transducer that is configured to induce a bending wave in a touch plate, as is recited in claim 1.”

The Examiner now points to the combination of *Hill* and *Paradiso* to rebut Applicant’s argument that *Paradiso* discloses an excitation transducer that is configured to induce a bending wave in a touch plate, as is recited in claim 1. Respectfully, the Examiner’s reliance on the combination of *Hill* and *Paradiso* does not alter the fact that *Paradiso* itself fails to disclose an excitation transducer that is configured to induce a bending wave in a touch plate, as is recited in claim 1.

All transducers disclosed in *Paradiso* are described as sensing transducers. The transducers disclosed in *Paradiso* are repeatedly described as transducers that are responsive to contact events produced by external impact sources such as a knuckle tap, metal ring tap, a bash-type impact such as when a fist bangs a pane of glass, and external noise (*see, e.g.*, paragraphs [0021], [0037], [0038], [0043], [0067]).

Applicant respectfully maintains that *Paradiso* fails to teach or contemplate an excitation transducer of any kind. In particular, *Paradiso* fails to teach or suggest an excitation transducer configured to induce bending waves in a touch plate, as is recited in claim 1. Applicant kindly requests that the Examiner identify, with particularity, a teaching in *Paradiso* to refute this assertion by Application. In the absence of sufficient evidence to refute Applicant’s assertion, it is respectfully requested that the Examiner’s statement of disagreement with Applicant on this point be withdrawn so that the record is clear on this point.

In section 8 on page 13 of the Office Action, the Examiner states that *Paradiso* teaches active buffer circuits each respectfully coupled to one sensor and a controller coupled to the sensors via active buffer circuits. The Examiner acknowledges, beginning on the bottom of page 4 of the Office Action, that *Hill* does not teach active buffer circuits coupled to sensors, a controller coupled to sensors via active buffers, or a controller connected to an excitation transducer via a non-actively buffered connection.

On page 5 of the Office Action, the Examiner states that the combination of *Hill* and *Paradiso* does not teach a controller connected to a transducer via a non-actively buffered connection. The Examiner thus acknowledges that the combination of *Hill* and *Paradiso* fails to teach all features of Applicant's claim 1.

As Applicant has strenuously argued, the combination of *Hill* and *Paradiso* also fails to suggest a controller connected to a transducer via a non-actively buffered connection. The Examiner acknowledges in the record that *Hill* does not mention sensors coupled to a controller via active buffer circuits. The Examiner further acknowledges in the record that *Hill* does not mention a controller coupled to an excitation transducer via a non-actively buffered connection. As discussed above, *Paradiso* reveals no teaching whatsoever of an excitation transducer, as all transducers discussed in *Paradiso* are described as sensing transducers, none of which are coupled to a controller via a non-actively buffered connection.

The combined teachings of *Hill* and *Paradiso* simply do not provide the requisite suggestion that a controller coupled to sensors via active buffer circuits should also be connected to an excitation transducer via a non-actively buffered connection, particularly when neither of the asserted references even mentions a non-actively buffered connection whatsoever. Applicant respectfully asserts that the combination of *Hill* and *Paradiso* would more likely suggest to one skilled in the art that an actively buffered connection, rather than a non-actively buffered connection, be used between a controller and an excitation transducer, since only *Paradiso* discusses details of the connections between the controller and sensors (*Hill* is silent on buffered connections), and all of these connections, as acknowledged by the Examiner, are actively buffered connections.

The asserted combination of *Hill* and *Paradiso* fails to teach or suggest all features of Applicant's claim 1. The modification of the *Hill* apparatus using the apparatus of *Paradiso* as suggested by the Examiner would still lack an excitation transducer coupled to a controller via a non-actively buffered connection, as is recited in Applicant's claim 1. For at least these reasons, claim 1 is not obvious in view of the combination of *Hill* and *Paradiso*. MPEP § 2142.

Obviousness under §103 requires an objective analysis of the following: “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art are resolved.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007) (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966)) Evidence of secondary considerations must also be considered. *Id.*

The scope and content of the prior art references of *Hill* and *Paradiso* is discussed hereinabove and in Applicant’s prior responsive communications. The level of ordinary skill in the pertinent art is not presently in contention. Differences between the combination of *Hill* and *Paradiso* and Applicant’s claims has been ascertained, also as discussed hereinabove and in Applicant’s prior responsive communications.

"To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985); MPEP 706.02(j) (emphasis added).

Applicant has established that the combination of *Hill* and *Paradiso* fails to expressly or impliedly suggest the claimed invention, particularly in view of the Examiner’s acknowledgement of same discussed above. As such, the Examiner is required to present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *Id.* Respectfully, the Examiner’s line of reasoning set forth in the Office Action(s) as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of *Hill* and *Paradiso* is not convincing.

On pages 5 and 14 of the instant Office Action, the Examiner states that the combination *Hill* and *Paradiso* does not specifically teach the controller connects to the transducer via a non-actively buffered connection. Notwithstanding this acknowledgement, the Examiner contends that it would have been obvious “to obtain that the controller

connects directly to the transducer not via any actively buffer in order to simplify the circuit, save cost, space and weight of the touch panel device.”

Applicant respectfully submits that the Examiner’s reasoning as to why the skilled artisan would have found Applicant’s claimed invention to have been obvious in light of the *Hill* and *Paradiso* teachings represents mere unsupported supposition. For example, the Examiner has offered no evidence as to why and/or how the skilled artisan could simplify the circuit, save cost, space and weight of the touch panel device by connecting a controller directly to a transducer not via any actively buffer.

No evidence has been supplied by the Examiner to show how these general design objectives could be achieved by connecting a controller directly to a transducer not via any actively buffer. For example, it is certainly not clear or evident that any appreciable savings on cost, space, and weight of the touch panel device would be achieved, since such circuitry is typically relatively small and has negligible weight (e.g., etched patterns on a silicon chip).

Moreover, it is certainly not clear or evident that a simplification of the circuitry would be achieved by connecting a controller directly to a transducer not via any actively buffer, as is contended by the Examiner. For example, all of *Paradiso*’s connections to the sensors are made via active buffer circuits per the Examiner’s characterization of this reference. *Hill* is silent on the nature of such connections. Hence, each reference teaches a single type of sensor connection. One skilled in the art would more likely than not view a requirement for a multiplicity of different connection types (e.g., actively and non-actively buffered connections) in a circuit to result in a more complex, rather than simpler, design of the circuitry.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385, 1396 (2007) (quoting Federal Circuit statement with approval) (emphasis added); and MPEP §2141.

Applicant respectfully submits that the Examiner's analysis supporting the obviousness rejection of Applicant's claims is not explicit, but is instead based on generalized design objectives having no explicit nexus with Applicant's claimed features. The Examiner's obviousness rejections are based on mere conclusory statements presented without any support from the references themselves or other convincing evidence. For reasons discussed above, Applicant respectfully submits that the Examiner has not presented sufficient evidence which, as a whole, shows that the combination of *Hill* and *Paradiso* establish a *prima facie* case of obviousness.

The United States Supreme Court affirmed in the *KSR Intern Co. v. Teleflex* decision addressing obviousness under §103(a) that a *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention (127 S.Ct. 1727, 1740 (U.S. 2007) citing *United States v. Adams*, 383 U.S. 39, 40 (1966)); see also MPEP § 2144.05(III) discussing *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997)).

When read in their entirety, the combination of the *Hill* and *Paradiso* references would more likely than not teach away from, or at least discourage, using a non-actively buffered connection between a controller and a transducer, since all of *Paradiso*'s connections to the sensors are made via active buffer circuits per the Examiner's characterization of this reference and *Hill* is silent on the nature of such connections.

As was previously argued, and as reasserted herein, Applicant respectfully submits that claim 1 is not rendered obvious by the combination of *Hill* and *Paradiso* on several grounds. The asserted combination, for example, fails to teach or suggest all the features of claim 1. Because the asserted combination of references fails to teach or suggest several of the above-identified limitations, and because the asserted combination does not provide a sufficient basis to support a reasonable expectation of success or the requisite suggestion or

motivation to combine or modify the references in the manner suggested by the Examiner, Applicant respectfully submits that the Examiner has failed to establish *prima facie* obviousness of Applicant's subject matter recited in independent claim 1.

For at least these reasons, and reasons set forth in Applicant's prior response, the rejection of claims 1-6, 8-14, 16-20 and 25-28 as being unpatentable over *Hill* and *Paradiso* is improper. Applicant respectfully request withdrawal of the rejection of these claims in view of the deficiencies on the Examiner's grounds for maintaining rejection of the claimed subject matter.

Claims 2-6, 8-14, 16-20, and 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hill* and *Paradiso*. Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Hill* and in view of *Paradiso* and further in view of *Bales*. Claims 15 and 21-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Hill* and in view of *Paradiso* and further in view of *Sobel*.

Each of claims 2-28 depend from independent claim 1 either directly or indirectly. While Applicant does not acquiesce to the particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the remarks made in connection with independent claim 1. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from any combination of *Hill*, *Paradiso*, *Bales*, and *Sobel*. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, consistent with the *In re Fine* decision, dependent claims 2-28 are not made obvious by the combination of *Hill* and *Paradiso*.

As such, Applicant respectfully requests withdrawal of the §103(a) rejection of claims 1-28, and notification that these claims are in condition for allowance.

It is to be understood that Applicant does not acquiesce to the Examiner's characterization of the asserted art or Applicant's claimed subject matter, nor of the Examiner's application of the asserted art or combinations thereof to Applicant's claimed subject matter. Moreover, Applicant does not acquiesce to any explicit or implicit

statements or conclusions by the Examiner concerning what would have been obvious to one of ordinary skill in the art, obvious design choices, alternative equivalent arrangements, common knowledge at the time of Applicant's invention, officially noticed facts, and the like. Applicant respectfully submits that a detailed discussion of each of the Examiner's rejections beyond that provided above is not necessary, in view of the clear absence of teaching and suggestion of various features recited in Applicant's pending claims and the lack of motivation to combine reference teachings. Applicant, however, reserves the right to address in detail the Examiner's characterizations, conclusions, and rejections in future prosecution.

Claims 1-2 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14 and 18 of co-pending Application No. 10/750,290.

Applicant respectfully asserts that, in view of the arguments made above, the Examiner is compelled to withdraw the substantive art rejections of the claims. Once withdrawn, the only rejection remaining in the subject application is the provisional nonstatutory obviousness-type double patenting rejection. In view of MPEP § 804 I(B)(1), Applicant respectfully submits that the provisional nonstatutory obviousness-type double patenting rejection should be withdrawn and that the subject application be permitted to issue as a patent.



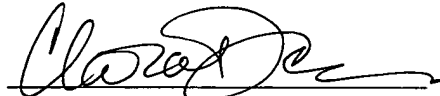
Authorization is given to charge Deposit Account No. 50-3581 (3MMM.563PA) any necessary fees for this filing. If the Examiner believes it necessary or helpful, the Examiner is invited to contact the attorney of record to discuss any issues related to this case.

Respectfully submitted,

HOLLINGSWORTH & FUNK, LLC  
8009 34<sup>th</sup> Avenue South, Suite 125  
Minneapolis, MN 55425  
952.854.2700

Date: March 24, 2008

By:

A handwritten signature in black ink, appearing to read 'Clara Davis', written over a horizontal line.

Clara Davis  
Reg. No. 50,495